



SEQUENCE LISTING

<110> AKIRA, SHIZUO
HEMMI, HIROAKI

<120> RECEPTOR PROTEINS SPECIFICALLY RECOGNIZING BACTERIAL
DNA

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<141> 2002-03-19

<150> PCT/JP01/04731
<151> 2001-06-05

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<170> PatentIn Ver. 3.3

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ctg gca agt tcc ttc aag aac ctg gtg tca ctg cag gag ctg aac atg	1219		
Leu Ala Ser Ser Phe Lys Asn Leu Val Ser Leu Gln Glu Leu Asn Met			
360	365	370	
aac ggc atc ttc ttc cgc tcg ctc aac aag tac acg ctc aga tgg ctg	1267		
Asn Gly Ile Phe Phe Arg Ser Leu Asn Lys Tyr Thr Leu Arg Trp Leu			
375	380	385	
gcc gat ctg ccc aaa ctc cac act ctg cat ctt caa atg aac ttc atc	1315		
Ala Asp Leu Pro Lys Leu His Thr Leu His Leu Gln Met Asn Phe Ile			
390	395	400	
aac cag gca cag ctc agc atc ttt ggt acc ttc cga gcc ctt cgc ttt	1363		
Asn Gln Ala Gln Leu Ser Ile Phe Gly Thr Phe Arg Ala Leu Arg Phe			
405	410	415	

gtg gac ttg tca gac aat cgc atc agt ggg cct tca acg ctg tca gaa	1411
Val Asp Leu Ser Asp Asn Arg Ile Ser Gly Pro Ser Thr Leu Ser Glu	
420 425 430 435	
gcc acc cct gaa gag gca gat gat gca gag cag gag gag ctg ttg tct	1459
Ala Thr Pro Glu Glu Ala Asp Asp Ala Glu Gln Glu Glu Leu Leu Ser	
440 445 450	
gcg gat cct cac cca gct cca ctg agc acc cct gct tct aag aac ttc	1507
Ala Asp Pro His Pro Ala Pro Leu Ser Thr Pro Ala Ser Lys Asn Phe	
455 460 465	
atg gac agg tgt aag aac ttc aag ttc acc atg gac ctg tct cgg aac	1555
Met Asp Arg Cys Lys Asn Phe Lys Phe Thr Met Asp Leu Ser Arg Asn	
470 475 480	
aac ctg gtg act atc aag cca gag atg ttt gtc aat ctc tca cgc ctc	1603
Asn Leu Val Thr Ile Lys Pro Glu Met Phe Val Asn Leu Ser Arg Leu	
485 490 495	
cag tgt ctt agc ctg agc cac aac tcc att gca cag gct gtc aat ggc	1651
Gln Cys Leu Ser Leu Ser His Asn Ser Ile Ala Gln Ala Val Asn Gly	
500 505 510 515	
tct cag ttc ctg ccg ctg act aat ctg cag gtg ctg gac ctg tcc cat	1699
Ser Gln Phe Leu Pro Leu Thr Asn Leu Gln Val Leu Asp Leu Ser His	
520 525 530	
aac aaa ctg gac ttg tac cac tgg aaa tcg ttc agt gag cta cca cag	1747
Asn Lys Leu Asp Leu Tyr His Trp Lys Ser Phe Ser Glu Leu Pro Gln	
535 540 545	
ttg cag gcc ctg gac ctg agc tac aac agc cag ccc ttt agc atg aag	1795
Leu Gln Ala Leu Asp Leu Ser Tyr Asn Ser Gln Pro Phe Ser Met Lys	
550 555 560	
ggc ata ggc cac aat ttc agt ttt gtg gcc cat ctg tcc atg cta cac	1843
Gly Ile Gly His Asn Phe Ser Phe Val Ala His Leu Ser Met Leu His	
565 570 575	
agc ctt agc ctg gca cac aat gac att cat acc cgt gtg tcc tca cat	1891
Ser Leu Ser Leu Ala His Asn Asp Ile His Thr Arg Val Ser Ser His	
580 585 590 595	
ctc aac agc aac tca gtg agg ttt ctt gac ttc agc ggc aac ggt atg	1939
Leu Asn Ser Asn Ser Val Arg Phe Leu Asp Phe Ser Gly Asn Gly Met	
600 605 610	
ggc cgc atg tgg gat gag ggg ggc ctt tat ctc cat ttc ttc caa ggc	1987
Gly Arg Met Trp Asp Glu Gly Gly Leu Tyr Leu His Phe Phe Gln Gly	
615 620 625	
ctg agt ggc ctg ctg aag ctg gac ctg tct caa aat aac ctg cat atc	2035
Leu Ser Gly Leu Leu Lys Leu Asp Leu Ser Gln Asn Asn Leu His Ile	
630 635 640	

ctc	cg	ccc	cag	aac	ctt	gac	aac	ctc	ccc	aag	agc	ctg	aag	ctg	ctg	2083
Leu	Arg	Pro	Gln	Asn	Leu	Asp	Asn	Leu	Pro	Lys	Ser	Leu	Lys	Leu	Leu	
645					650					655						
agc	ctc	cga	gac	aac	tac	cta	tct	ttc	ttt	aac	tgg	acc	agt	ctg	tcc	2131
Ser	Leu	Arg	Asp	Asn	Tyr	Leu	Ser	Phe	Phe	Asn	Trp	Thr	Ser	Leu	Ser	
660					665					670					675	
ttc	ctg	ccc	aac	ctg	gaa	gtc	cta	gac	ctg	gca	ggc	aac	cag	cta	aag	2179
Phe	Leu	Pro	Asn	Leu	Glu	Val	Leu	Asp	Leu	Ala	Gly	Asn	Gln	Leu	Lys	
					680				685				690			
gcc	ctg	acc	aat	ggc	acc	ctg	cct	aat	ggc	acc	ctc	ctc	cag	aaa	ctg	2227
Ala	Leu	Thr	Asn	Gly	Thr	Leu	Pro	Asn	Gly	Thr	Leu	Leu	Gln	Lys	Leu	
					695				700				705			
gat	gtc	agc	agc	aac	agt	atc	gtc	tct	gtg	gtc	cca	gcc	ttc	ttc	gct	2275
Asp	Val	Ser	Ser	Asn	Ser	Ile	Val	Ser	Val	Val	Pro	Ala	Phe	Phe	Ala	
					710			715				720				
ctg	gcg	gtc	gag	ctg	aaa	gag	gtc	aac	ctc	agc	cac	aac	att	ctc	aag	2323
Leu	Ala	Val	Glu	Leu	Lys	Glu	Val	Asn	Leu	Ser	His	Asn	Ile	Leu	Lys	
					725			730				735				
acg	gtg	gat	cgc	tcc	tgg	ttt	ggg	ccc	att	gtg	atg	aac	ctg	aca	gtt	2371
Thr	Val	Asp	Arg	Ser	Trp	Phe	Gly	Pro	Ile	Val	Met	Asn	Leu	Thr	Val	
					740			745			750			755		
cta	gac	gtg	aga	agc	aac	cct	ctg	cac	tgt	gcc	tgt	ggg	gca	gcc	ttc	2419
Leu	Asp	Val	Arg	Ser	Asn	Pro	Leu	His	Cys	Ala	Cys	Gly	Ala	Ala	Phe	
					760			765			770					
gta	gac	tta	ctg	ttg	gag	gtg	cag	acc	aag	gtg	cct	ggc	ctg	gct	aat	2467
Val	Asp	Leu	Leu	Glu	Val	Gln	Thr	Lys	Val	Pro	Gly	Leu	Ala	Asn		
					775			780			785					
gg	gtg	aag	tgt	ggc	agc	ccc	ggc	cag	ctg	cag	ggc	cgt	agc	atc	ttc	2515
Gly	Val	Lys	Cys	Gly	Ser	Pro	Gly	Gln	Leu	Gln	Gly	Arg	Ser	Ile	Phe	
					790			795			800					
gca	cag	gac	ctg	cg	ctg	tgc	ctg	gat	gag	gtc	ctc	tct	tgg	gac	tgc	2563
Ala	Gln	Asp	Leu	Arg	Leu	Cys	Leu	Asp	Glu	Val	Leu	Ser	Trp	Asp	Cys	
					805			810			815					
ttt	ggc	ctt	tca	ctc	ttg	gct	gtg	gcc	gtg	ggc	atg	gtg	gtg	cct	ata	2611
Phe	Gly	Leu	Ser	Leu	Leu	Ala	Val	Ala	Val	Gly	Met	Val	Val	Pro	Ile	
					820			825			830			835		
ctg	cac	cat	ctc	tgc	ggc	tgg	gac	gtc	tgg	tac	tgt	ttt	cat	ctg	tgc	2659
Leu	His	His	Leu	Cys	Gly	Trp	Asp	Val	Trp	Tyr	Cys	Phe	His	Leu	Cys	
					840			845			850					
ctg	gca	tgg	cta	cct	ttg	ctg	gcc	cgc	agc	cga	cgc	agc	gcc	caa	gct	2707
Leu	Ala	Trp	Leu	Pro	Leu	Leu	Ala	Arg	Ser	Arg	Arg	Ser	Ala	Gln	Ala	
					855			860			865					

ctc ccc tat gat gcc ttc gtg gtg ttc gat aag gca cag agc gca gtt 2755
 Leu Pro Tyr Asp Ala Phe Val Val Phe Asp Lys Ala Gln Ser Ala Val
 870 875 880

 gcg gac tgg gtg tat aac gag ctg cgg gtg cgg ctg gag gag cgg cgc 2803
 Ala Asp Trp Val Tyr Asn Glu Leu Arg Val Arg Leu Glu Glu Arg Arg
 885 890 895

 ggt cgc cga gcc cta cgc ttg tgt ctg gag gac cga gat tgg ctg cct 2851
 Gly Arg Arg Ala Leu Arg Leu Cys Leu Glu Asp Arg Asp Trp Leu Pro
 900 905 910 915

 ggc cag acg ctc ttc gag aac ctc tgg gct tcc atc tat ggg agc cgc 2899
 Gly Gln Thr Leu Phe Glu Asn Leu Trp Ala Ser Ile Tyr Gly Ser Arg
 920 925 930

 aag act cta ttt gtg ctg gcc cac acg gac cgc gtc agt ggc ctc ctg 2947
 Lys Thr Leu Phe Val Leu Ala His Thr Asp Arg Val Ser Gly Leu Leu
 935 940 945

 cgc acc agc ttc ctg ctg gct cag cag cgc ctg ttg gaa gac cgc aag 2995
 Arg Thr Ser Phe Leu Leu Ala Gln Gln Arg Leu Leu Glu Asp Arg Lys
 950 955 960

 gac gtg gtg gtg ttg gtg atc ctg cgt ccg gat gcc cac cgc tcc cgc 3043
 Asp Val Val Val Leu Val Ile Leu Arg Pro Asp Ala His Arg Ser Arg
 965 970 975

 tat gtg cga ctg cgc cag cgt ctc tgc cgc cag agt gtg ctc ttc tgg 3091
 Tyr Val Arg Leu Arg Gln Arg Leu Cys Arg Gln Ser Val Leu Phe Trp
 980 985 990 995

 ccc cag cag ccc aac ggg cag ggg ggc ttc tgg gcc cag ctg agt aca 3139
 Pro Gln Gln Pro Asn Gly Gln Gly Phe Trp Ala Gln Leu Ser Thr
 1000 1005 1010

 gcc ctg act agg gac aac cgc cac ttc tat aac cag aac ttc tgc cgg 3187
 Ala Leu Thr Arg Asp Asn Arg His Phe Tyr Asn Gln Asn Phe Cys Arg
 1015 1020 1025

 gga cct aca gca gaa tag ctctagagcaa cagctggaaa cagctgcattc 3235
 Gly Pro Thr Ala Glu
 1030

 ttcatgcctg gttcccgagt tgctctgcct gccttgctct gtcttactac accgctatattt 3295

 ggcaagtgcg caatatatgc taccaagcca ccaggcccac ggagcaaagg ttggcagtaa 3355

 agggtagttt tcttcccatg catcttcag gagagtgaag atagacacca gaccacaca 3415

 gaacaggact ggagttcatt ctctgcccct ccacccact ttgcctgtct ctgtat 3471

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 Leu Pro Cys Glu Leu Lys Pro His Gly Leu Val Asp Cys Asn Trp Leu
 35 40 45
 Phe Leu Lys Ser Val Pro Arg Phe Ser Ala Ala Ser Cys Ser Asn
 50 55 60
 Ile Thr Arg Leu Ser Leu Ile Ser Asn Arg Ile His His Leu His Asn
 65 70 75 80
 Ser Asp Phe Val His Leu Ser Asn Leu Arg Gln Leu Asn Leu Lys Trp
 85 90 95
 Asn Cys Pro Pro Thr Gly Leu Ser Pro Leu His Phe Ser Cys His Met
 100 105 110
 Thr Ile Glu Pro Arg Thr Phe Leu Ala Met Arg Thr Leu Glu Glu Leu
 115 120 125
 Asn Leu Ser Tyr Asn Gly Ile Thr Thr Val Pro Arg Leu Pro Ser Ser
 130 135 140
 Leu Val Asn Leu Ser Leu Ser His Thr Asn Ile Leu Val Leu Asp Ala
 145 150 155 160
 Asn Ser Leu Ala Gly Leu Tyr Ser Leu Arg Val Leu Phe Met Asp Gly
 165 170 175
 Asn Cys Tyr Tyr Lys Asn Pro Cys Thr Gly Ala Val Lys Val Thr Pro
 180 185 190
 Gly Ala Leu Leu Gly Leu Ser Asn Leu Thr His Leu Ser Val Lys Tyr
 195 200 205
 Asn Asn Leu Thr Lys Val Pro Arg Gln Leu Pro Pro Ser Leu Glu Tyr
 210 215 220
 Leu Leu Val Ser Tyr Asn Leu Ile Val Lys Leu Gly Pro Glu Asp Leu
 225 230 235 240
 Ala Asn Leu Thr Ser Leu Arg Val Leu Asp Val Gly Gly Asn Cys Arg
 245 250 255
 Arg Cys Asp His Ala Pro Asn Pro Cys Ile Glu Cys Gly Gln Lys Ser
 260 265 270
 Leu His Leu His Pro Glu Thr Phe His His Leu Ser His Leu Glu Gly
 275 280 285
 Leu Val Leu Lys Asp Ser Ser Leu His Thr Leu Asn Ser Ser Trp Phe
 290 295 300

Gln Gly Leu Val Asn Leu Ser Val Leu Asp Leu Ser Glu Asn Phe Leu
 305 310 315 320

Tyr Glu Ser Ile Asn His Thr Asn Ala Phe Gln Asn Leu Thr Arg Leu
 325 330 335

Arg Lys Leu Asn Leu Ser Phe Asn Tyr Arg Lys Lys Val Ser Phe Ala
 340 345 350

Arg Leu His Leu Ala Ser Ser Phe Lys Asn Leu Val Ser Leu Gln Glu
 355 360 365

Leu Asn Met Asn Gly Ile Phe Phe Arg Ser Leu Asn Lys Tyr Thr Leu
 370 375 380

Arg Trp Leu Ala Asp Leu Pro Lys Leu His Thr Leu His Leu Gln Met
 385 390 395 400

Asn Phe Ile Asn Gln Ala Gln Leu Ser Ile Phe Gly Thr Phe Arg Ala
 405 410 415

Leu Arg Phe Val Asp Leu Ser Asp Asn Arg Ile Ser Gly Pro Ser Thr
 420 425 430

Leu Ser Glu Ala Thr Pro Glu Glu Ala Asp Asp Ala Glu Gln Glu Glu
 435 440 445

Leu Leu Ser Ala Asp Pro His Pro Ala Pro Leu Ser Thr Pro Ala Ser
 450 455 460

Lys Asn Phe Met Asp Arg Cys Lys Asn Phe Lys Phe Thr Met Asp Leu
 465 470 475 480

Ser Arg Asn Asn Leu Val Thr Ile Lys Pro Glu Met Phe Val Asn Leu
 485 490 495

Ser Arg Leu Gln Cys Leu Ser Leu Ser His Asn Ser Ile Ala Gln Ala
 500 505 510

Val Asn Gly Ser Gln Phe Leu Pro Leu Thr Asn Leu Gln Val Leu Asp
 515 520 525

Leu Ser His Asn Lys Leu Asp Leu Tyr His Trp Lys Ser Phe Ser Glu
 530 535 540

Leu Pro Gln Leu Gln Ala Leu Asp Leu Ser Tyr Asn Ser Gln Pro Phe
 545 550 555 560

Ser Met Lys Gly Ile Gly His Asn Phe Ser Phe Val Ala His Leu Ser
 565 570 575

Met Leu His Ser Leu Ser Leu Ala His Asn Asp Ile His Thr Arg Val
 580 585 590

Ser Ser His Leu Asn Ser Asn Ser Val Arg Phe Leu Asp Phe Ser Gly
 595 600 605

Asn Gly Met Gly Arg Met Trp Asp Glu Gly Gly Leu Tyr Leu His Phe
 610 615 620

Phe Gln Gly Leu Ser Gly Leu Leu Lys Leu Asp Leu Ser Gln Asn Asn
 625 630 635 640

Leu His Ile Leu Arg Pro Gln Asn Leu Asp Asn Leu Pro Lys Ser Leu
 645 650 655

Lys Leu Leu Ser Leu Arg Asp Asn Tyr Leu Ser Phe Phe Asn Trp Thr
 660 665 670

Ser Leu Ser Phe Leu Pro Asn Leu Glu Val Leu Asp Leu Ala Gly Asn
 675 680 685

Gln Leu Lys Ala Leu Thr Asn Gly Thr Leu Pro Asn Gly Thr Leu Leu
 690 695 700

Gln Lys Leu Asp Val Ser Ser Asn Ser Ile Val Ser Val Val Pro Ala
 705 710 715 720

Phe Phe Ala Leu Ala Val Glu Leu Lys Glu Val Asn Leu Ser His Asn
 725 730 735

Ile Leu Lys Thr Val Asp Arg Ser Trp Phe Gly Pro Ile Val Met Asn
 740 745 750

Leu Thr Val Leu Asp Val Arg Ser Asn Pro Leu His Cys Ala Cys Gly
 755 760 765

Ala Ala Phe Val Asp Leu Leu Glu Val Gln Thr Lys Val Pro Gly
 770 775 780

Leu Ala Asn Gly Val Lys Cys Gly Ser Pro Gly Gln Leu Gln Gly Arg
 785 790 795 800

Ser Ile Phe Ala Gln Asp Leu Arg Leu Cys Leu Asp Glu Val Leu Ser
 805 810 815

Trp Asp Cys Phe Gly Leu Ser Leu Leu Ala Val Ala Val Gly Met Val
 820 825 830

Val Pro Ile Leu His His Leu Cys Gly Trp Asp Val Trp Tyr Cys Phe
 835 840 845

His Leu Cys Leu Ala Trp Leu Pro Leu Leu Ala Arg Ser Arg Arg Ser
 850 855 860

Ala Gln Ala Leu Pro Tyr Asp Ala Phe Val Val Phe Asp Lys Ala Gln
 865 870 875 880

Ser Ala Val Ala Asp Trp Val Tyr Asn Glu Leu Arg Val Arg Leu Glu
 885 890 895

Glu Arg Arg Gly Arg Arg Ala Leu Arg Leu Cys Leu Glu Asp Arg Asp
 900 905 910

Trp Leu Pro Gly Gln Thr Leu Phe Glu Asn Leu Trp Ala Ser Ile Tyr
 915 920 925

Gly Ser Arg Lys Thr Leu Phe Val Leu Ala His Thr Asp Arg Val Ser
 930 935 940

Gly Leu Leu Arg Thr Ser Phe Leu Leu Ala Gln Gln Arg Leu Leu Glu
 945 950 955 960

Asp Arg Lys Asp Val Val Val Leu Val Ile Leu Arg Pro Asp Ala His
 965 970 975

Arg Ser Arg Tyr Val Arg Leu Arg Gln Arg Leu Cys Arg Gln Ser Val
 980 985 990

Leu Phe Trp Pro Gln Gln Pro Asn Gly Gln Gly Phe Trp Ala Gln
 995 1000 1005

Leu Ser Thr Ala Leu Thr Arg Asp Asn Arg His Phe Tyr Asn Gln Asn
 1010 1015 1020

Phe Cys Arg Gly Pro Thr Ala Glu
 1025 1030

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 Ser Asn Leu Arg Gln Leu Asn Leu Lys Trp Asn Cys Pro Pro Thr Gly
 1 5 10 15

ctt agc ccc ttg cac ttc tct tgc cac atg acc att gag ccc aga acc 96
 Leu Ser Pro Leu His Phe Ser Cys His Met Thr Ile Glu Pro Arg Thr
 20 25 30

ttc ctg gct atg cgt aca ctg gag gag ctg aac ctg agc tat aat ggt 144
 Phe Leu Ala Met Arg Thr Leu Glu Glu Leu Asn Leu Ser Tyr Asn Gly
 35 40 45

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 Leu Ser Pro Leu His Phe Ser Cys His Met Thr Ile Glu Pro Arg Thr
 20 25 30
 Phe Leu Ala Met Arg Thr Leu Glu Glu Leu Asn Leu Ser Tyr Asn Gly
 35 40 45

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 Ser Asn Leu Arg Gln Leu Asn Leu Lys Trp Ile Leu Ser Thr Cys Pro
 1 5 10 15
 cga cgg atc cga aca aac gac cca aca ccc gtg cgt ttt att ctg tct 96
 Arg Arg Ile Arg Thr Asn Asp Pro Thr Pro Val Arg Phe Ile Leu Ser
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 ttt tat tgc cga tcc cct cag aag aac tcg tca aga agg cga tag 141
 Phe Tyr Cys Arg Ser Pro Gln Lys Asn Ser Ser Arg Arg Arg
 35 40 45

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 Phe Tyr Cys Arg Ser Pro Gln Lys Asn Ser Ser Arg Arg Arg
 35 40 45